

GOVERNMENT OF THE DISTRICT OF COLUMBIA


District Department of the Environment


Air Quality Division



CHAPTER 2 TECHNICAL MEMORANDUM

TO: File

THROUGH: Stephen S. Ours, P.E. 
Chief, Permitting Branch

FROM: Olivia Achuko 
Environmental Engineer

**SUBJECT: Providence Hospital
Permits #6629, #6630 and #6631 to Construct and Operate Emergency
Generators**

DATE: January 28, 2013

BACKGROUND INFORMATION

Providence Hospital operates a hospital and health care facility located at 1150 Varnum NE in the District of Columbia. The hospital currently operates under Title V Operating Permit #008 which was issued on September 4, 2004.

On May 4, 2012 Providence Hospital submitted a permit application package which included a revised Title V renewal application and applications for installation of three (3) 2500 kW new emergency generators with supporting documentation (manufacturer specification and emission calculations). In July 2012, additional information was submitted to supplement the original document. Providence Hospital is currently a Title V source and the emission information in the package indicated an emission increase which would require the source to go through NSR review based on our old regulation at that time. The source was aware of that and included some information required for LAER evaluation. After review of the document, it was determined that additional information was needed for LAER evaluation.

In November 2012, the District of Columbia's new NSR went into effect which could affect the NSR applicability of the source. For the new NSR, for a source to go through NSR review for NO_x, it must have a significant emission increase of 25 or more tons per year of NO_x. The source figured out that it could reduce its emission increase to less than 25 TPY and decided to modify its application. A revised application package was received on December 12, 2012 with



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new proposed emission reduction operating limitations. Providence Hospital has chosen to request an enforceable limit to the operating hours of the three (3) proposed generators to 375 hours per year for each engine.

The applicant has not requested that any of the materials submitted with this application be held confidential.

TECHNICAL INFORMATION

The proposed three new generators are subject to 40 CFR 60.4207(b); reduced sulfur content of the diesel fuel as detailed on Condition III(d) of the permit. The engines will be compliant with US EPA Tier 2 emission standards as required by NSPS Subpart III for stationary compression-ignition reciprocating internal combustion engine (RICE).

Upon review of the revised submitted documentation, the gross increase in potential emissions from the three proposed engines is 24.15 TPY of NO_x. The combined potential emissions from the entire facility will still be over 25 TPY, but the gross increase from the generators is less than 25 tons per year, and therefore the emissions increase from the project is not considered “significant” under 20 DCMR 204. The source is able to avoid New Source Review (NSR) by taking reduced operating hours. The source submitted revised calculations of emissions based on the 375 hours of operation limitation.

Providence Hospital has requested to maintain the Title V application renewal application submitted in May 2012 and use the addendum of December 2012 as a modification to the application.

REGULATORY REVIEW

20 DCMR Chapter 2, Section 200: General Permit Requirements:

Emergency generators are sources of oxides of nitrogen and other air pollutants because of the use of diesel fuel. Thus a Chapter 2 permit is required for installation and operation.

20 DCMR Chapter 8, Section 805 and 20 DCMR Chapter 2, Section 204: Limit on hours of operation and NO_x:

There is a limit of 375 hours of emergency operation which then limits the oxides of nitrogen (NO_x) emissions from the equipment. This limit in operation ensures that the unit is exempt from NO_x RACT under 20 DCMR 805.1(c)(2) and the NSR requirements found in 20 DCMR 204 as discussed above. The limit in operation is specified in Condition III(a) of the permits and the related NO_x emission limit is found in Condition II(a).

20 DCMR Chapter 6: Particulates:

The visible emission limitations of 20 DCMR 606 are applicable to this facility. Condition II(b) includes this requirements.

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20 DCMR Chapter 9, Section 903: Odorous or Other Nuisance Air Pollutants

“An emission into the atmosphere of odorous or other air pollutants from any source in any quantity and of any characteristic, and duration which is, or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life or property is prohibited [20 DCMR 903.1]” is applicable to all sources. It is contained in Condition II(c) of the permit.

Other Regulations:

40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Reciprocating Internal Combustion Engines (RICE):

The requirements for owners and operators of new stationary sources are applicable.

40 CFR 60.4207(d): Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are required to use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm). The displacement of the proposed engines is 78.08 liters. The source indicated that only diesel fuel which contains a maximum sulfur content of 15 ppm (0.0015% by weight) will be used in the new engines.

This requirement, as well as all other applicable requirements of this regulation, have been included in the proposed permit.

40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines:

This regulation is applicable, but the requirements consist of complying with the requirements of 40 CFR 60, Subpart IIII, and thus no special requirements related to this regulation are specified in the permit.

RECOMMENDATIONS

The public notice announcement was submitted to the D.C. Register for publication in the February 1, 2013 edition. They will also be posted in on the DDOE website. The proposed permits are available for public comment through March 4, 2013. If no comments are received, I recommend issuance of the permits following the end of the comment period. If comments are received, they will be addressed prior to any final permit action.

SSO:NOA